ABSTRACT OF THE DISCLOSURE

A network system includes a plurality of networks, a first internetwork apparatus having a plurality of first ports each connected to the plurality of networks, a second internetwork apparatus having a plurality of second ports each connected to the plurality of networks, and a data transmission path connected to the first and second internetwork apparatuses to transmit data mutually between the first and second internetwork apparatuses. In the normal state, each of the plurality of first ports is caused to be able to transmit and receive data to and from one of the plurality of networks and the plurality of second ports are caused not to be able to receive data from the plurality of networks and to be able to transmit data to the plurality of networks. Whether a failure occurs in any of one of the plurality of first ports and a route between one of the plurality of first ports and one of the plurality of networks connected thereto is detected and the one of the plurality of first ports is caused not to be able to transmit and receive data to and from the one of the plurality of networks in response to detection of occurrence of failure. One of the plurality of second ports connected to the one of the plurality of first ports through the one of said plurality of networks is caused to be able to transmit and receive data to and from the one of the plurality of networks in response to detection of occurrent of failure.